CENTERS FOR DISEASE CONTROL

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

November 23, 1990 / Vol. 39 / No. 46

829 Surveillance for HIV-2 Infection in Blood Donors — United States, 1987–1989
832 Respiratory Syncytial Virus and Parainfluenza Virus Surveillance — United States, 1989–90
839 Abortion Surveillance: Preliminary Analysis — United States, 1988
841 *MMWR* Serial Publications

Current Trends

Surveillance for HIV-2 Infection in Blood Donors — United States, 1987–1989

In collaboration with CDC, blood collection agencies are conducting ongoing surveillance for human immunodeficiency virus type 2 (HIV-2) infection among U.S. blood donors. Through December 1989, no blood donors with HIV-2 infection had been detected. This report summarizes findings of recent HIV-2 surveillance by the American Red Cross Blood Services (ARCBS) and the New York Blood Center (NYBC).

To examine the potential for HIV-2 infection in blood supplies, the ARCBS and the NYBC tested stored frozen serum (collected from January 1987 to December 1989) that had previously tested repeatedly reactive by the HIV-1 enzyme immunoassay (EIA) (serum from persons with HIV-2 infection often cross-reacts with HIV-1 EIA [*1,2*]). The ARCBS tested 24,826 samples (approximately 95% of all specimens at the ARCBS that tested repeatedly reactive by the HIV-1 EIA). Of these, 93% were identified from routine HIV-1 screening of approximately 18 million regular, directed (i.e., recipient specifies donor), and autologous blood donations from all ARCBS collection facilities; 7% were identified from testing of nondonor samples referred for HIV-1 confirmatory testing. The NYBC tested 3314 specimens that were repeatedly reactive by the HIV-1 EIA and indeterminate by HIV-1 Western blot. These samples were identified from approximately 2 million donations.

The ARCBS and the NYBC screened donors with the licensed Abbott* (North Chicago, Illinois) and Dupont/Biotech (Wilmington, Delaware) whole-virus lysate HIV-1 EIAs, respectively. Serum samples repeatedly reactive by HIV-1 EIA were tested with a whole-virus lysate HIV-2 EIA (Genetic Systems, Seattle, Washington) that was recently licensed by the Food and Drug Administration (FDA). Of the 24,826 ARCBS

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service, the U.S. Department of Health and Human Services, the American National Red Cross, or the New York Blood Center.

HIV-2 Surveillance — Continued

samples, 2426 (9.8%) were also repeatedly reactive by the HIV-2 EIA (Table 1). Of these, 86% were HIV-1 positive by Western blot at the time of initial donor screening. Of the 3314 NYBC samples, 48 (1.5%) had repeatedly reactive HIV-2 EIA results.

Twenty-six blinded HIV-2–positive control specimens†, 141 HIV-1 EIA-negative control specimens, and 2415 specimens from ARCBS and NYBC that tested repeatedly reactive by the HIV-2 EIA were sent to CDC for further testing with investigational HIV-1 and HIV-2 EIA peptide assays (Genetic Systems, Seattle, Washington). (An additional 59 specimens from ARCBS and NYBC had insufficient quantity of serum for further testing.) Specimens with positive HIV-2 peptide-assay results were also tested by an investigational whole-virus lysate HIV-2 Western blot (Genetic Systems, Seattle, Washington). Specimens with positive HIV-1 and HIV-2 peptide results were also tested with an HIV-1 Western blot (Dupont/Biotech, Wilmington, Delaware) at CDC.

A specimen was considered to have HIV-2 antibody if the HIV-2 Western blot result was reactive by World Health Organization criteria (*3*). No blood-donor specimens had HIV-2 antibody.

Reported by: CT Fang, PhD, AE Williams, PhD, Jerome H Holland Laboratory, American National Red Cross, Rockville, Maryland. MCJ Rios, C Bianco, New York Blood Center, New York City. Div of HIV/AIDS, Center for Infectious Diseases, CDC.

Editorial Note: ARCBS accounts for ≥50% of the blood donations in the United States (*4*). Sixty percent to 90% of serum samples from persons with HIV-2 infection are reactive by the Abbott whole-virus lysate HIV-1 EIA (*1,2*), which is used for donor screening by the ARCBS. Therefore, by testing blood donations that were repeatedly reactive by the HIV-1 EIA (approximately 0.13% of >18 million), the ARCBS study would have detected ≥60% of donations potentially containing HIV-2 antibody. However, among approximately 18 million ARCBS donations, no blood donors with HIV-2 infection were detected.

A previously reported study from San Francisco that used a similar methodology for 942 donor samples reactive by the HIV-1 EIA also failed to identify donors seropositive for HIV-2 antibody (*5*). Although the San Francisco study and the study reported here may have failed to detect persons with HIV-2 infection whose serum samples did not cross-react on the HIV-1 EIA, these findings suggest that from 1987

†As determined by all of the following: 1) either a nonreactive or weakly reactive HIV-1 peptide EIA, 2) a strongly reactive HIV-2 peptide EIA, 3) a reactive HIV-2 Western blot, and 4) an indeterminate HIV-1 Western blot.

TABLE 1. Results of HIV-2 enzyme immunoassay (EIA) testing of serum repeatedly reactive by the HIV-1 EIA, by initial HIV-1 Western blot result — American Red Cross Blood Services, January 1987–December 1989

	HIV-2 EIA							
	Repeatedly reactive		Not repeatedly reactive*		Nonreactive		Total	
HIV-1 Western blot	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Positive	2,085	(86)	132	(47)	993	(4)	**3,210**	**(13)**
Indeterminate	185	(8)	49	(18)	3,729	(17)	**3,963**	**(16)**
Negative	156	(6)	99	(35)	17,398	(79)	**17,653**	**(71)**
Total	**2,426**	**(100)**	**280**	**(100)**	**22,120**	**(100)**	**24,826**	**(100)**

*Initially reactive but not repeatedly reactive.

HIV-2 Surveillance — Continued

through 1989. HIV-2 infection in U.S. blood donors was extremely rare. In a previous study of 8503 blood donors randomly selected from three areas of the United States in 1988, no donors with HIV-2 infection were detected (*6*).

Eighteen persons with HIV-2 infection in the United States have been reported to CDC. All of the 15 for whom historical information is available had recently immigrated from West Africa, had sexual contact with West Africans, or had traveled to West Africa. One person was a volunteer blood donor (*7*) who was born in the United States and had traveled to West Africa; she donated blood in 1986 before the HIV-2 surveillance project began. Because she had a reactive HIV-1 EIA, her blood was not transfused.

Based on the low prevalence of HIV-2 in the United States and the failure to detect HIV-2 infections in large blood-donor surveys, routine HIV-2 donor screening with HIV-2–specific assays from 1987 through 1989 would have detected few, if any, additional donations from persons infected with HIV-2. For these reasons, the Blood Products Advisory Committee of the FDA has recommended and the FDA has determined that routine HIV-2 screening of blood and plasma donated for use in transfusion is not necessary (*8*). (Moreover, recent immigrants from West Africa or persons who are sexual contacts of West Africans have been requested to defer from donating blood [*9*].) FDA will reevaluate and update the recommendations for donor deferral and screening of blood donors for HIV-2 based on additional surveillance reports and new technologic developments, such as licensed combination tests for the detection of antibodies to both HIV-1 and HIV-2. CDC and collaborating blood collection agencies will continue surveillance for HIV-2 in U.S. blood donors and other selected populations.

References

1. George JR, Rayfield MA, Phillips S, et al. Efficacies of U.S. Food and Drug Administration-licensed HIV-1-screening enzyme immunoassays for detecting antibodies to HIV-2. AIDS 1990;4:321–6.
2. Schumacher RT, Howard J, Ayres L, Pista A, Avillez F, Garrett P. Cross-reactivity of anti-HIV-2 positive serum in U.S. FDA licensed screening tests for anti-HIV-1 [Abstract]. VI International Conference on AIDS. Vol 3. San Francisco, June 20–24, 1990:245.
3. World Health Organization. Recommendations for the interpretation of HIV-2 Western blot results. Wkly Epidemiol Rec 1990;65:69–76.
4. Petersen LR, Dodd R, Dondero TJ. Methodologic approaches to surveillance of HIV infection among blood donors. Public Health Rep 1990;105:153–7.
5. Busch MP, Petersen LR, Schable C, Perkins HA. Monitoring blood donors for HIV-2 infection by testing anti–HIV-1 reactive sera. Transfusion 1990;30:184–7.
6. CDC. AIDS due to HIV-2 infection—New Jersey. MMWR 1988;37:33–5.
7. O'Brien TR, Schable CA, Polon C, et al. HIV-2 infections in the United States [Abstract]. VI International Conference on AIDS. Vol 2. San Francisco, June 20–24, 1990:245.
8. Parkman PD. Use of Genetic Systems HIV-2 EIA [Memorandum to all registered blood establishments]. Bethesda, Maryland: Food and Drug Administration, Center for Biologics Evaluation and Research, 1990.
9. Parkman PD. Recommendations for the prevention of human immunodeficiency virus (HIV) transmission by blood and blood products [Memorandum to all registered blood establishments]. Bethesda, Maryland: Food and Drug Administration, Center for Biologics Evaluation and Research, 1990.

Respiratory Syncytial Virus and Parainfluenza Virus Surveillance — United States, 1989–90

To provide public health officials and health-care providers with additional information about the epidemiology of respiratory syncytial virus (RSV) and parainfluenza virus infections, CDC recently expanded its Respiratory and Enterovirus Surveillance System. Awareness by health-care providers of circulation of these respiratory pathogens in the community may enable more effective treatment of affected patients and institution of appropriate control measures. This report summarizes data from the expanded surveillance system for July 1989 through June 1990.

Data on RSV and parainfluenza viruses were provided by 94 laboratories participating in the National Respiratory Virus Surveillance System (NRVSS). These included 80 university or community hospital laboratories, 10 state or county public health laboratories, and four commercial laboratories. These laboratories, which represent 49 states, provided monthly reports of the number of specimens tested for RSV and the number of specimens positive by antigen-detection techniques, serology, or viral culture. Of these 94 laboratories, 52 also provided data on results of testing for parainfluenza viruses. Most laboratories performed enzyme immunoassay (EIA) and/or direct fluorescent antibody (DFA) tests to detect RSV (56% and 53%, respectively). For parainfluenza viruses, most laboratories performed DFA and/or indirect fluorescent antibody (IFA) tests (50% and 83%, respectively). This report includes data from laboratories that submitted reports for at least 8 of the 12 months.

Data were also provided by an additional 12 state health department laboratories* that submitted monthly reports on the number of RSV or parainfluenza virus isolates identified in conjunction with reports on enterovirus isolations.

From July 1989 through June 1990, 71 NRVSS laboratories in 45 states tested 52,496 specimens for RSV; of these, 11,884 (23%) were positive. Detection of RSV peaked in January, when 4104 specimens were positive (35% of all positive specimens) (Figure 1). Detections peaked in January throughout the United States except in the West South Central region, where the peak occurred in December. The state health department laboratories reported 245 isolations of RSV, which peaked in February, when 90 isolates were positive (37% of all positive specimens).

During the same period, 38 NRVSS laboratories tested 33,060 specimens for parainfluenza viruses. Of these, 518 (1.6%) were parainfluenza virus type 1 (P1); 182 (0.6%), parainfluenza virus type 2 (P2); and 478 (1.5%), parainfluenza type 3 (P3). P1 and P2 identification peaked in November with 150 and 59 detections, respectively (29% and 32% of positive specimens by type, respectively); P3 identification peaked in May with 137 detections (29% of positive specimens) (Figure 2). The state public health laboratories reported 60 isolations of P1, 35 isolations of P2, and 76 isolations of P3. P1 activity peaked in October and December (13 isolates each month [22% of positive specimens]), and P2, in October (nine isolates [26% of positive specimens]); in comparison, P3 activity peaked in May (13 isolates [17% of positive specimens]).

Reported by: School of Public Health, Emory Univ, Atlanta. State and territorial public health laboratories. National Respiratory Virus Surveillance System Laboratories. Respiratory and Enterovirus Br, Div of Viral and Rickettsial Diseases, Center for Infectious Diseases, CDC.

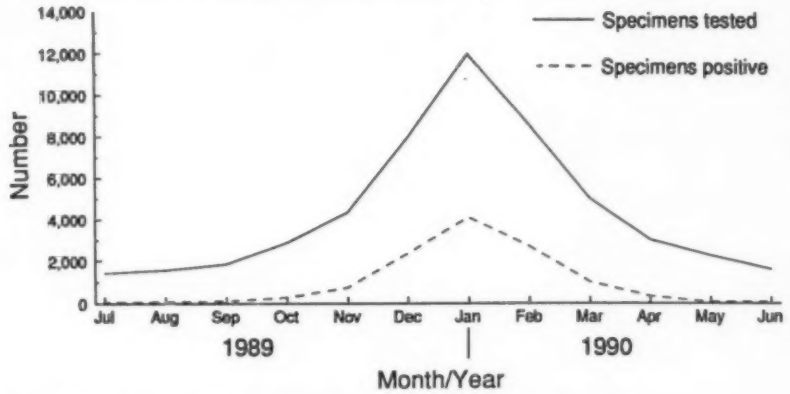
*Arizona, Connecticut, Missouri, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Carolina, Texas, Virginia, and Wisconsin.

Respiratory Viruses -- Continued

Editorial Note: RSV is the single most important respiratory pathogen of infancy and early childhood worldwide; in temperate climates, RSV causes yearly outbreaks of pneumonia and bronchiolitis in the winter and early spring (*1,2*). Outbreaks caused by parainfluenza viruses occur during alternate years in the fall (P1 and P2) or throughout the year, with increased activity in the spring (P3) (*2*). The surveillance

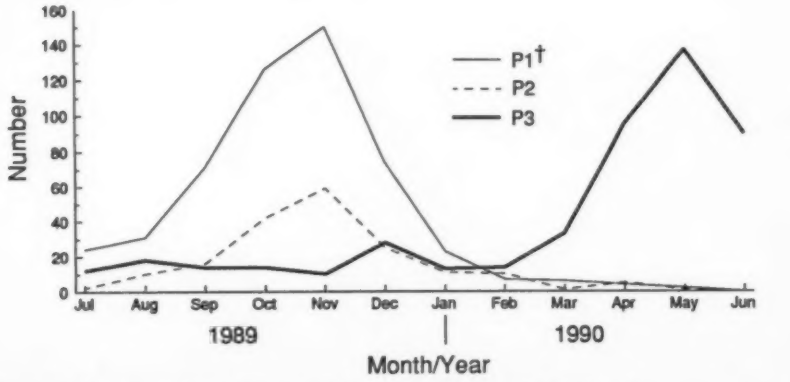
(Continued on page 839)

FIGURE 1. Specimens tested and specimens positive for respiratory syncytial virus, by month -- United States, July 1989–June 1990*



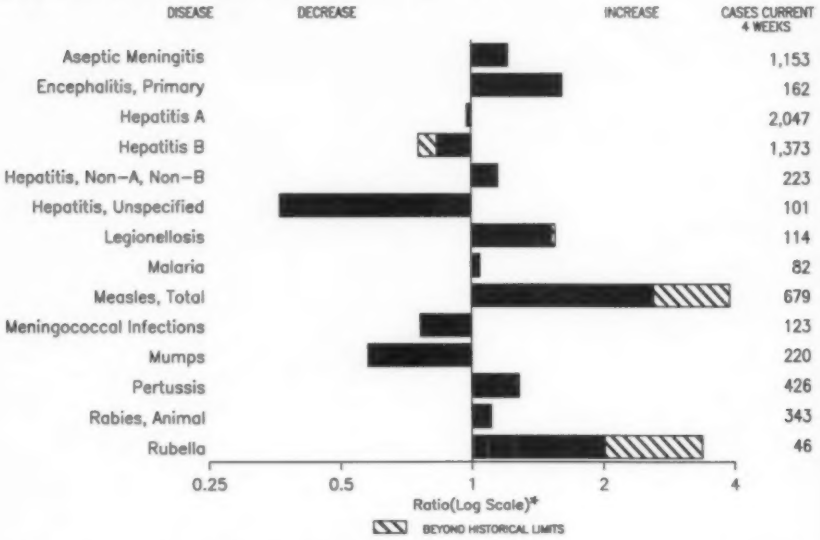
*National Respiratory Virus Surveillance System (71 laboratories reporting).

FIGURE 2. Specimens positive for parainfluenza virus types 1, 2, and 3, by month -- United States, July 1989–June 1990*



*National Respiratory Virus Surveillance System (38 laboratories reporting).
†P1 = parainfluenza virus type 1; P2 = parainfluenza virus type 2; P3 = parainfluenza virus type 3.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending November 17, 1990, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from comparable, previous, and subsequent 4-week periods for past 5 years).

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending November 17, 1990 (46th Week)

	Cum. 1990		Cum. 1990
AIDS	36,621	Plague	2
Anthrax	-	Poliomyelitis, Paralytic*	-
Botulism: Foodborne	19	Psittacosis	97
Infant	54	Rabies, human	1
Other	6	Syphilis: civilian	43,052
Brucellosis	72	military	220
Cholera	4	Syphilis, congenital, age < 1 year	685
Congenital rubella syndrome	4	Tetanus	52
Diphtheria	4	Toxic shock syndrome	260
Encephalitis, post-infectious	83	Trichinosis	25
Gonorrhea: civilian	585,516	Tuberculosis	20,495
military	7,637	Tularemia	126
Leprosy	180	Typhoid fever	448
Leptospirosis	47	Typhus fever, tickborne (RMSF)	627
Measles: imported	1,077		
indigenous	24,078		

*Three cases of suspected poliomyelitis have been reported in 1990; five of 13 suspected cases in 1989 were confirmed and all were vaccine-associated.

TABLE II. Cases of specified notifiable diseases, United States, weeks ending November 17, 1990, and November 18, 1989 (46th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	36,621	9,859	978	83	585,516	621,037	25,513	17,730	2,290	1,478	1,155	180
NEW ENGLAND	1,341	362	24	-	16,365	18,298	557	933	85	63	65	10
Maine	52	18	3	-	179	234	10	24	4	1	5	-
N.H.	55	36	-	-	250	161	7	40	6	3	4	-
Vt.	14	35	2	-	46	62	5	42	6	-	6	-
Mass.	751	117	11	-	6,910	7,168	366	575	59	57	41	9
R.I.	79	113	1	-	1,102	1,309	49	42	-	2	9	1
Conn.	390	43	7	-	7,878	9,364	120	210	10	-	-	-
MID. ATLANTIC	10,869	931	44	7	77,306	87,936	3,351	2,237	206	87	350	20
Upstate N.Y.	1,329	502	36	1	12,810	15,000	1,048	622	75	25	132	1
N.Y. City	6,142	132	3	3	30,620	35,149	487	553	25	43	83	14
N.J.	2,132	-	1	-	13,059	13,199	411	524	39	-	48	4
Pa.	1,066	297	4	3	20,817	24,590	1,405	538	67	19	87	1
E.N. CENTRAL	2,556	2,978	259	14	112,419	116,567	2,114	2,085	376	83	291	2
Ohio	575	565	84	4	33,223	30,462	213	359	77	12	98	-
Ind.	238	306	8	8	10,117	8,590	162	353	18	15	45	-
Ill.	1,056	692	85	2	34,686	37,872	1,051	411	44	17	15	1
Mich.	484	1,026	67	-	27,452	30,126	349	587	37	39	91	1
Wis.	203	389	15	-	6,961	9,517	339	375	200	-	42	-
W.N. CENTRAL	914	519	108	2	30,020	29,227	1,612	805	130	31	71	1
Minn.	152	103	68	1	3,680	3,330	224	99	25	-	7	-
Iowa	43	102	7	-	2,059	2,464	256	50	12	4	4	-
Mo.	536	202	7	1	18,229	17,754	443	511	64	20	37	-
N. Dak.	2	19	3	-	94	130	20	5	2	1	1	-
S. Dak.	6	9	5	-	260	254	344	7	4	-	2	-
Nebr.	55	42	7	-	1,610	1,385	103	31	4	-	12	1
Kans.	120	42	11	-	4,108	3,910	222	102	19	6	8	-
S. ATLANTIC	7,844	1,754	287	28	165,893	166,408	2,861	3,523	306	218	170	6
Del.	83	45	5	-	2,830	2,916	101	89	9	2	11	-
Md.	863	245	24	1	21,071	19,737	929	491	53	14	55	3
D.C.	590	9	-	-	11,950	9,637	15	39	4	-	2	-
Va.	650	317	50	1	16,172	14,449	280	226	40	147	13	-
W. Va.	59	53	60	-	1,198	1,303	20	80	4	9	4	-
N.C.	527	230	39	-	25,241	25,165	614	952	119	-	31	1
S.C.	319	21	1	-	13,183	15,186	40	555	15	9	24	-
Ga.	1,135	290	5	1	35,926	32,563	330	442	11	9	20	-
Fla.	3,618	544	103	25	38,322	45,452	532	649	51	28	10	2
E.S. CENTRAL	919	665	60	2	51,888	50,464	360	1,384	196	8	54	-
Ky.	162	178	25	-	5,193	4,903	85	465	55	6	22	-
Tenn.	310	142	26	2	16,387	16,848	174	749	120	-	19	-
Ala.	194	236	9	-	17,507	16,405	99	151	18	1	13	-
Miss.	253	109	-	-	12,801	12,308	2	19	3	1	-	-
W.S. CENTRAL	3,833	760	54	7	63,454	64,247	3,051	1,913	105	275	49	35
Ark.	181	27	5	-	7,503	7,442	504	78	11	25	9	-
La.	634	86	10	-	11,526	13,734	186	302	5	7	14	1
Okla.	170	79	3	6	5,448	5,614	527	148	26	25	17	-
Tex.	2,848	568	36	1	38,977	37,457	1,834	1,385	63	218	9	34
MOUNTAIN	957	369	23	2	11,872	13,116	4,079	1,296	197	118	44	3
Mont.	11	6	-	-	192	168	160	63	7	4	5	-
Idaho	23	9	-	-	127	157	83	76	8	-	3	-
Wyo.	2	8	1	-	131	94	58	15	5	1	2	-
Colo.	309	97	5	-	3,227	2,886	295	168	45	44	9	-
N. Mex.	88	20	1	-	1,084	1,169	853	177	13	10	3	-
Ariz.	274	159	9	-	4,570	5,362	1,805	433	67	42	11	2
Utah	96	27	3	-	346	405	535	92	27	7	4	-
Nev.	155	43	4	2	2,195	2,875	290	272	25	10	7	1
PACIFIC	7,588	1,521	119	21	56,299	74,772	7,528	3,554	689	595	61	103
Wash.	524	-	6	1	4,555	5,969	1,210	529	115	31	13	6
Oreg.	276	-	-	-	2,253	2,816	746	367	53	8	-	-
Calif.	6,635	1,322	105	19	48,118	64,696	5,319	2,532	504	544	46	74
Alaska	24	107	7	-	943	836	182	55	7	5	-	-
Hawaii	129	92	1	1	430	455	71	71	10	7	2	23
Guam	2	2	-	-	210	147	12	4	-	11	-	1
P.R.	1,529	62	7	-	653	972	155	540	13	26	-	6
V.I.	11	-	-	-	406	628	1	12	-	-	-	-
Amer. Samoa	-	1	-	31	63	53	34	-	-	-	-	10
C.N.M.I.	-	-	-	-	160	88	10	9	-	15	-	4

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending November 17, 1990, and November 18, 1989 (46th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	1990	Cum. 1990	Cum. 1989
UNITED STATES	1049	449	24,078	1	1,077	14,809	2,113	62	4,554	71	3,708	3,432	9	1,056	348
NEW ENGLAND	87	-	265	-	27	378	168	1	42	7	384	362	-	8	6
Maine	2	-	28	-	2	1	14	-	-	2	20	25	-	1	-
N.H.	4	-	-	-	9	15	13	1	11	3	60	16	-	1	4
Vt.	7	-	-	-	1	3	13	-	2	-	7	6	-	-	1
Mass.	47	-	23	-	7	103	76	-	12	2	266	286	-	2	1
R.I.	6	-	27	-	3	41	13	-	5	-	7	11	-	1	-
Conn.	19	-	187	-	5	215	39	-	12	-	24	18	-	3	-
MID. ATLANTIC	225	-	1,305	-	157	993	331	3	321	16	510	275	-	11	38
Upstate N.Y.	45	-	204	-	112	152	123	3	129	2	313	113	-	10	14
N.Y. City	80	-	437	-	21	121	46	-	-	-	-	12	-	-	15
N.J.	74	-	284	-	15	455	66	-	89	-	21	35	-	-	7
Pa.	26	-	380	-	9	265	96	-	103	14	176	115	-	1	-
E.N. CENTRAL	60	-	3,368	-	143	5,264	279	4	481	5	870	506	-	162	29
Ohio	9	-	551	-	3	1,551	85	-	91	-	238	68	-	131	3
Ind.	3	-	417	-	1	109	29	-	20	5	129	40	-	-	-
Ill.	22	-	1,309	-	10	2,840	77	-	168	-	298	167	-	19	22
Mich.	17	-	348	-	125	334	65	4	155	-	91	43	-	9	1
Wis.	9	-	743	-	4	430	23	-	47	-	134	188	-	3	3
W.N. CENTRAL	20	4	894	-	17	749	71	8	154	4	210	221	5	53	6
Minn.	6	-	424	-	6	24	14	-	15	-	51	59	-	42	-
Iowa	2	-	25	-	1	13	1	2	23	-	18	15	-	4	1
Mo.	10	-	99	-	1	459	32	1	57	-	106	129	-	-	4
N. Dak.	-	-	-	-	-	-	2	-	-	-	2	3	-	1	-
S. Dak.	-	-	15	-	8	-	2	-	-	-	1	3	-	-	-
Nebr.	-	-	97	-	1	113	5	-	8	-	7	8	-	1	-
Kans.	2	4	234	-	-	140	15	5	51	4	25	4	5	5	1
S. ATLANTIC	211	5	932	-	375	717	382	17	1,864	7	305	347	1	21	10
Del.	6	-	8	-	3	40	4	-	6	1	9	1	-	-	-
Md.	57	-	194	-	18	102	46	6	1,055	1	62	74	-	2	2
D.C.	10	-	16	-	7	41	11	-	36	1	15	3	-	1	-
Va.	51	-	84	-	2	22	50	1	103	-	24	33	-	1	-
W. Va.	2	-	6	-	-	53	16	-	44	-	29	32	-	-	-
N.C.	16	5	20	-	15	190	62	7	301	4	75	72	1	1	1
S.C.	3	-	4	-	-	15	25	1	63	-	5	-	-	-	-
Ga.	16	-	99	-	259	18	63	-	89	-	38	49	-	1	-
Fla.	50	-	501	-	71	236	105	2	167	-	48	83	-	15	7
E.S. CENTRAL	20	-	194	-	4	239	127	7	103	3	155	203	-	4	5
Ky.	2	-	41	-	1	44	37	-	-	-	-	1	-	1	-
Tenn.	9	-	104	-	-	145	55	5	57	3	79	116	-	3	4
Ala.	9	-	23	-	2	50	31	2	19	-	68	75	-	-	1
Miss.	-	-	26	-	1	-	4	-	27	-	8	11	-	-	-
W.S. CENTRAL	64	-	4,201	-	95	3,311	148	10	665	2	187	364	-	66	50
Ark.	4	-	18	-	31	22	18	-	139	1	22	29	-	3	-
La.	7	-	10	-	-	109	33	2	113	-	32	26	-	-	5
Okla.	9	-	174	-	-	110	16	-	102	1	53	59	-	1	1
Tex.	44	-	3,999	-	64	3,070	81	8	311	-	80	250	-	62	44
MOUNTAIN	24	4	865	-	100	416	72	1	330	9	299	645	-	110	36
Mont.	1	-	-	-	1	13	11	-	1	-	35	39	-	15	1
Idaho	5	-	16	-	10	7	6	-	143	-	46	72	-	49	32
Wyo.	1	-	-	-	15	-	-	-	2	-	-	-	-	-	2
Colo.	3	-	91	-	47	97	23	-	25	8	111	96	-	4	-
N. Mex.	4	-	81	-	12	31	12	N	N	-	18	32	-	-	-
Ariz.	9	-	300	-	12	145	6	-	130	1	54	385	-	32	-
Utah	-	-	146	-	-	114	7	-	10	-	31	20	-	2	-
Nev.	1	4	231	-	3	9	7	1	19	-	4	1	-	8	1
PACIFIC	338	436	12,054	1	159	2,742	535	11	594	18	788	509	3	621	170
Wash.	25	-	202	-	69	54	66	-	52	4	203	184	-	-	-
Oreg.	17	-	169	-	44	62	59	N	N	7	98	18	-	74	4
Calif.	290	435	11,571	1†	40	2,596	394	11	513	5	386	281	3	531	144
Alaska	2	-	78	-	2	1	11	-	4	-	7	1	-	-	-
Hawaii	4	1	34	-	4	32	5	-	25	2	94	25	-	16	22
Guam	3	U	-	U	1	4	2	U	5	U	1	1	U	-	-
P.R.	3	-	1,665	-	-	562	13	-	8	2	14	4	-	-	8
V.I.	-	-	21	-	3	4	-	-	13	-	-	-	-	-	-
Amer. Samoa	36	U	501	U	-	-	-	U	37	U	-	-	U	-	-
C.N.M.I.	-	U	25	U	-	-	-	U	8	U	4	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending November 17, 1990, and November 18, 1989 (46th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	43,052	38,910	260	20,495	18,906	126	448	627	3,875
NEW ENGLAND	1,497	1,513	24	530	580	4	31	20	6
Maine	7	13	7	18	25	1	-	-	-
N.H.	48	13	1	3	24	-	-	1	3
Vt.	2	1	1	8	8	-	-	-	-
Mass.	608	448	13	290	324	3	30	17	-
R.I.	23	28	1	62	61	-	-	-	-
Conn.	809	1,010	1	149	138	-	1	2	3
MID. ATLANTIC	8,369	8,058	30	4,896	3,948	2	98	30	970
Upstate N.Y.	800	840	11	334	308	1	18	15	185
N.Y. City	3,774	3,858	5	3,061	2,263	-	54	2	-
N.J.	1,343	1,233	-	838	775	1	22	8	341
Pa.	2,452	2,127	14	663	602	-	4	5	444
E.N. CENTRAL	3,121	1,693	57	1,981	1,903	2	31	45	184
Ohio	482	150	21	349	329	1	6	34	11
Ind.	95	54	1	196	188	1	2	2	15
Ill.	1,300	753	8	977	885	-	14	2	29
Mich.	932	584	27	385	389	-	8	7	51
Wis.	312	152	-	74	114	-	1	-	58
W.N. CENTRAL	458	291	30	541	486	42	5	53	590
Minn.	82	51	5	105	97	-	-	-	219
Iowa	69	32	8	57	45	-	1	2	19
Mo.	248	152	8	271	227	32	3	35	28
N. Dak.	1	4	-	18	15	-	-	-	84
S. Dak.	2	1	-	13	26	4	-	2	191
Nebr.	14	23	3	16	21	3	-	1	4
Kans.	42	28	6	61	55	3	1	13	45
S. ATLANTIC	13,628	13,792	16	3,782	3,961	5	73	277	1,059
Del.	166	192	1	34	38	-	-	1	28
Md.	1,059	753	1	310	347	-	32	19	407
D.C.	1,004	720	1	142	149	-	-	2	-
Va.	790	516	3	343	319	2	8	24	184
W. Va.	18	15	-	68	69	-	1	1	37
N.C.	1,524	1,004	4	519	513	2	4	168	8
S.C.	944	754	2	420	448	1	1	41	123
Ga.	3,476	3,431	1	620	652	-	4	18	192
Fla.	4,647	6,407	3	1,326	1,426	-	23	3	80
E.S. CENTRAL	4,039	2,675	14	1,487	1,512	8	4	79	186
Ky.	98	52	3	333	345	2	1	11	46
Tenn.	1,707	1,152	8	437	496	6	1	58	27
Ala.	1,213	817	3	433	409	-	2	10	90
Miss.	1,021	654	-	284	262	-	-	-	3
W.S. CENTRAL	7,478	5,518	12	2,426	2,264	40	18	100	417
Ark.	498	336	-	294	256	31	-	21	32
La.	2,340	1,397	1	251	292	-	1	3	31
Okla.	215	108	8	182	194	8	3	70	123
Tex.	4,425	3,677	3	1,699	1,522	1	14	6	231
MOUNTAIN	760	587	29	476	454	19	20	12	207
Mont.	-	1	-	22	16	-	-	4	45
Idaho	6	1	2	12	25	-	-	1	7
Wyo.	2	6	2	5	-	6	-	1	49
Colo.	46	61	7	27	41	6	-	1	23
N. Mex.	40	26	3	94	81	4	-	1	12
Ariz.	540	294	9	222	215	-	18	1	36
Utah	17	15	5	38	37	3	-	3	16
Nev.	109	183	1	56	39	-	2	-	19
PACIFIC	3,702	4,783	48	4,376	3,798	4	168	11	296
Wash.	312	418	4	242	207	2	21	2	-
Oreg.	123	211	2	115	126	-	4	1	1
Calif.	3,241	4,133	41	3,797	3,252	-	133	3	273
Alaska	16	7	-	53	52	2	-	-	22
Hawaii	10	14	1	169	161	-	10	5	-
Guam	2	4	-	40	79	-	-	-	-
P.R.	296	482	-	102	276	-	2	-	40
V.I.	12	8	-	4	4	-	-	-	-
Amer. Samoa	-	-	-	12	7	-	1	-	-
C.N.M.I.	4	12	-	43	27	-	4	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending November 17, 1990 (46th Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	608	438	111	36	13	10	41
Boston, Mass.	154	99	28	15	7	5	13
Bridgeport, Conn.	47	38	6	2	-	2	6
Cambridge, Mass.	23	20	3	-	-	-	1
Fall River, Mass.	29	24	5	-	-	-	1
Hartford, Conn.	59	46	9	1	1	2	1
Lowell, Mass.	18	13	3	1	1	-	-
Lynn, Mass.	11	9	2	-	-	-	-
New Bedford, Mass.	19	10	5	4	-	-	-
New Haven, Conn.	61	44	11	4	2	-	4
Providence, R.I.	31	23	8	-	-	-	1
Somerville, Mass.	9	7	1	1	-	-	1
Springfield, Mass.	32	20	8	3	1	-	1
Waterbury, Conn.	34	27	6	1	-	-	5
Worcester, Mass.	81	58	17	4	1	1	7
MID. ATLANTIC	2,506	1,599	473	281	71	80	124
Albany, N.Y.	42	24	12	2	2	2	3
Allentown, Pa.	20	17	2	1	-	-	3
Buffalo, N.Y.	100	52	21	18	4	4	3
Camden, N.J.	57	37	7	6	4	3	-
Elizabeth, N.J.	19	18	1	-	-	-	1
Erie, Pa.†	47	34	10	2	1	-	4
Jersey City, N.J.	73	46	6	8	2	11	2
N.Y. City, N.Y.	1,349	820	271	189	43	26	51
Newark, N.J.	64	27	12	16	3	6	6
Paterson, N.J.	25	13	3	1	-	8	1
Philadelphia, Pa.	295	199	64	18	4	9	23
Pittsburgh, Pa.†	60	43	8	1	2	6	2
Reading, Pa.	33	28	2	3	-	-	5
Rochester, N.Y.	124	98	14	7	2	3	9
Schenectady, N.Y.	24	17	7	-	-	-	1
Scranton, Pa.†	36	21	9	4	2	-	2
Syracuse, N.Y.	63	49	13	-	1	-	8
Trenton, N.J.	36	23	6	5	-	2	-
Utica, N.Y.	11	9	2	-	-	-	-
Yonkers, N.Y.	28	24	3	-	1	-	-
E.N. CENTRAL	2,277	1,526	434	177	65	75	124
Akron, Ohio	55	38	10	5	1	1	3
Canton, Ohio	32	28	3	-	1	-	1
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	138	88	33	7	3	7	8
Cleveland, Ohio	148	92	30	9	6	11	5
Columbus, Ohio	180	121	31	14	10	4	5
Dayton, Ohio	104	74	21	8	1	-	5
Detroit, Mich.	244	137	53	33	11	10	5
Evansville, Ind.	42	33	7	2	-	-	1
Fort Wayne, Ind.	59	43	10	3	3	-	5
Gary, Ind.	15	7	4	2	2	-	-
Grand Rapids, Mich.	43	28	7	4	3	1	9
Indianapolis, Ind.	157	103	31	14	5	4	13
Madison, Wis.	24	13	3	5	1	2	1
Milwaukee, Wis.	142	98	31	7	2	4	14
Peoria, Ill.	54	45	6	-	-	3	4
Rockford, Ill.	52	36	7	6	-	3	7
South Bend, Ind.	54	46	6	1	1	-	9
Toledo, Ohio	99	74	11	9	2	3	7
Youngstown, Ohio	71	60	5	3	3	-	6
W.N. CENTRAL	692	476	127	50	23	16	37
Des Moines, Iowa	58	49	6	1	1	1	6
Duluth, Minn.	23	20	3	-	-	-	3
Kansas City, Kans.	17	12	4	1	-	-	-
Kansas City, Mo.	117	69	31	9	6	2	2
Lincoln, Nebr.	36	22	8	3	1	2	1
Minneapolis, Minn.	160	111	28	8	7	6	10
Omaha, Nebr.	95	66	13	10	4	2	8
St. Louis, Mo.	100	67	17	12	2	2	1
St. Paul, Minn.	49	32	12	4	-	1	3
Wichita, Kans.	37	28	5	2	2	-	3
S. ATLANTIC	1,343	832	270	146	36	57	64
Atlanta, Ga.	170	83	40	25	6	16	5
Baltimore, Md.	189	114	37	28	3	7	14
Charlotte, N.C.	103	59	20	20	1	3	4
Jacksonville, Fla.	136	83	31	12	6	4	7
Miami, Fla.	141	78	32	16	4	10	2
Norfolk, Va.	55	33	12	4	1	5	4
Richmond, Va.	69	44	11	7	1	6	4
Savannah, Ga.	43	35	5	1	2	-	4
St. Petersburg, Fla.	93	73	13	3	2	2	2
Tampa, Fla.	158	113	33	8	3	1	9
Washington, D.C.	163	98	32	22	7	3	9
Wilmington, Del.	23	19	4	-	-	-	-
E.S. CENTRAL	691	474	129	47	24	17	52
Birmingham, Ala.	113	75	22	12	2	2	6
Chattanooga, Tenn.	29	20	6	2	1	-	-
Knoxville, Tenn.	82	60	16	3	3	-	8
Louisville, Ky.	68	43	19	3	2	1	1
Memphis, Tenn.	183	124	30	8	11	10	18
Mobile, Ala.	49	32	11	4	2	-	1
Montgomery, Ala.	40	30	4	6	-	-	4
Nashville, Tenn.	127	90	21	9	3	4	14
W.S. CENTRAL	1,727	1,065	375	181	60	46	57
Austin, Tex.	72	47	11	8	3	3	3
Baton Rouge, La.	34	23	6	5	-	-	-
Corpus Christi, Tex.	55	33	18	2	-	2	2
Dallas, Tex.	215	123	44	34	6	8	7
El Paso, Tex.	54	39	9	3	2	1	-
Fort Worth, Tex	102	65	19	7	8	3	6
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	47	29	13	1	2	2	5
New Orleans, La.	105	61	21	12	8	3	-
San Antonio, Tex.	187	118	47	13	5	4	10
Shreveport, La.	39	30	3	2	1	3	1
Tulsa, Okla.	83	61	15	5	1	1	5
MOUNTAIN	698	458	121	77	23	19	49
Albuquerque, N. Mex.	89	57	17	10	3	2	4
Colo. Springs, Colo.	38	25	6	5	2	-	8
Denver, Colo.	140	95	20	20	5	-	12
Las Vegas, Nev.	97	66	22	8	1	-	8
Ogden, Utah	19	17	2	-	-	-	4
Phoenix, Ariz.	157	97	25	19	4	12	4
Pueblo, Colo.	27	21	3	1	2	-	3
Salt Lake City, Utah	40	18	7	8	5	2	-
Tucson, Ariz.	91	62	19	6	1	3	6
PACIFIC	1,662	1,132	280	171	51	25	112
Berkeley, Calif.	16	14	1	1	-	-	2
Fresno, Calif.	72	51	9	2	4	5	2
Glendale, Calif.	16	15	1	-	-	-	2
Honolulu, Hawaii	77	53	17	7	-	-	10
Long Beach, Calif.	88	62	18	7	1	-	13
Los Angeles Calif.	376	234	69	53	16	3	22
Oakland, Calif.	46	32	6	6	1	1	2
Pasadena, Calif.	36	26	5	3	2	-	4
Portland, Oreg.	104	78	14	7	3	2	4
Sacramento, Calif.§	164	111	32	14	4	3	13
San Diego, Calif.	161	104	25	20	8	4	13
San Francisco, Calif.	129	77	30	20	1	-	5
San Jose, Calif.	140	104	19	11	4	2	11
Seattle, Wash.	101	67	17	10	3	4	3
Spokane, Wash.	59	47	6	4	2	-	4
Tacoma, Wash.	77	57	11	6	2	1	3
TOTAL	12,204††	8,000	2,320	1,166	366	345	660

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past available 4 weeks.

Respiratory Viruses — Continued

data in this report are consistent with previously described seasonal characteristics of these viruses: RSV was the most commonly identified pathogen, and detections peaked in the winter season.

Although RSV and parainfluenza virus infections primarily cause serious infections in infants and young children, they also can cause severe disease in adults, especially elderly and immunocompromised adults (*3,4*). Because RSV outbreaks have been associated with increased hospitalizations (*1*) and mortality (*5*), detection of RSV in the community should alert health-care providers to diagnostic considerations and to management (*6*) and prevention options (*7*). Patients with compromised immune (*8*), cardiac (*9*), or pulmonary (*10*) systems are at increased risk for serious complications of RSV infection and may be most likely to benefit from effective infection-control practices (*7*) and antiviral chemotherapy (*6*).

To provide more timely surveillance information about these viruses, beginning with the 1990–91 season, CDC is changing from a monthly postcard reporting system to a weekly telephone-based reporting system. Participating NRVSS laboratories will report the number of respiratory viruses detected each week by telephone through a computer polling service. This information will be automatically tabulated and made available by the middle of the following week to reporting laboratories, state health departments, and others through the Public Health Network.

References

1. Kim HW, Arrobio JO, Brandt CD, et al. Epidemiology of respiratory syncytial virus infection in Washington, D.C. I. Importance of the virus in different respiratory tract disease syndromes and temporal distribution of infection. Am J Epidemiol 1973;98:216–25.
2. Easton AJ, Eglin RP. Epidemiology of parainfluenza virus type 3 in England and Wales over a ten year period. Epidemiol Infect 1989;102:531–5.
3. Morales F, Calder MA, Inglis JM, Murdoch PS, Williamson J. A study of respiratory infections in the elderly to assess the role of respiratory syncytial virus. J Infect 1983;7:236–47.
4. Englund JA, Sullivan CJ, Jordan C, Dehner LP, Vercellotti GM, Balfour HH Jr. Respiratory syncytial virus infection in immunocompromised adults. Ann Intern Med 1988;109:203–8.
5. Anderson LJ, Parker RA, Strikas RL. Association between respiratory syncytial virus outbreaks and lower respiratory tract deaths of infants and young children. J Infect Dis 1990;161:640–6.
6. American Academy of Pediatrics, Committee on Infectious Diseases. Ribavirin therapy of respiratory syncytial virus. Pediatrics 1987;79:475–8.
7. Garner JS, Simmons BP. Guideline for isolation precautions in hospitals. Infect Control 1983;4(suppl):245–325.
8. Hall CB, Powell KR, MacDonald NE, et al. Respiratory syncytial viral infection in children with compromised immune function. N Engl J Med 1986;315:77–81.
9. MacDonald NE, Hall CB, Suffin SC, Alexson C, Harris PJ, Manning JA. Respiratory syncytial viral infection in infants with congenital heart disease. N Engl J Med 1982;307:397–400.
10. Groothuis JR, Gutierrez KM, Lauer BA. Respiratory syncytial virus infection in children with bronchopulmonary dysplasia. Pediatrics 1988;82:199–203.

Abortion Surveillance: Preliminary Analysis — United States, 1988

In 1988, 1,371,285 legal abortions were reported to CDC from the 50 states and the District of Columbia (Table 1), an increase of 1.3% over the number reported for 1987. In 1988, the national abortion ratio was 352 legal abortions per 1000 live births, and the national abortion rate (number of legal abortions per 1000 women 15–44 years of

Abortion — Continued

TABLE 1. Characteristics of women who obtained legal abortions — United States, selected years, 1972–1988

Characteristic	Year						
	1972	1976	1980	1985	1986	1987	1988*
Reported no. legal abortions	586,760	988,267	1,297,606	1,328,570	1,328,112	1,353,671	1,371,285
Abortion ratio†	180	312	359	354	354	356	352
Abortion rate§	13	21	25	24	23	24	24
	Percentage distribution¶						
Residence							
Abortion in-state	56.2	90.0	92.6	92.4	92.3	92.0	91.9
Abortion out-of-state	43.8	10.0	7.4	7.6	7.7	8.0	8.1
Age (yrs)							
≤19	32.6	32.1	29.2	26.3	25.3	25.8	25.1
20–24	32.5	33.3	35.5	34.7	34.0	33.4	32.8
≥25	34.9	34.6	35.3	39.0	40.7	40.8	42.1
Race							
White	77.0	66.6	69.9	66.6	67.0	66.4	65.2
All other races	23.0	33.4	30.1	33.4	33.0	33.6	34.8
Marital status							
Married	29.7	24.6	23.1	19.3	20.2**	20.8**	20.4
Unmarried	70.3	75.4	76.9	80.7	79.8**	79.2**	79.6
No. live births††							
0	49.4	47.7	58.4	56.3	55.1	53.6	52.5
1	18.2	20.7	19.5	21.6	22.1	22.8	23.4
2	13.3	15.4	13.7	14.5	14.9	15.5	16.0
3	8.7	8.3	5.3	5.1	5.3	5.5	5.6
≥4	10.4	7.9	3.2	2.5	2.6	2.6	2.5
Type of procedure							
Curettage	88.6	92.8	95.5	97.5	97.0	97.2	97.2
Suction	65.2	82.6	89.8	94.6	94.5	93.3	93.7
Sharp	23.4	10.2	5.7	2.9	2.5	3.7	3.5
Intrauterine instillation	10.4	6.0	3.1	1.7	1.4	1.3	1.1
Hysterotomy/ Hysterectomy	0.6	0.2	0.1	0.0§§	0.0§§	0.0§§	0.0§§
Other	0.5	0.9	1.3	0.8	1.6	1.5	1.7
Weeks of gestation							
≤8	34.0	47.0	51.7	50.3	51.0	50.4	49.6
9–10	30.7	28.0	26.2	26.6	25.8	26.0	26.1
11–12	17.5	14.4	12.2	12.5	12.2	12.4	12.5
13–15	8.4	4.5	5.2	5.9	6.1	6.2	6.4
16–20	8.2	5.1	3.9	3.9	4.1	4.2	4.4
≥21	1.3	0.9	0.9	0.8	0.8	0.8	1.0

*Preliminary analysis.
†Number of abortions per 1000 live births.
§Number of abortions per 1000 women 15–44 years of age.
¶Excludes unknown values. Because the number of states that report each characteristic varies from year to year, temporal comparisons should be made with caution.
**Updates data previously published.
††For 1972 and 1976, data indicate number of living children.
§§<0.05%.

Abortion — Continued

age) was 24. As in previous years, approximately 92% of women who had legal abortions were residents of the state in which the procedure was performed.

Women who obtained legal abortions in 1988 were predominately <25 years of age, white, and unmarried and had not had any liveborn children. Curettage (suction and sharp) remained the primary abortion procedure (97% of all such procedures). As in previous years, approximately half of legal abortions were performed in the first 8 weeks of gestation and 88% in the first 12 weeks.

Reported by: Statistics and Computer Resources Br and Pregnancy and Infant Health Br, Div of Reproductive Health, Center for Chronic Disease Prevention and Health Promotion, CDC.

Notice to Readers

MMWR Serial Publications, Vol. 39, 1990

The following documents have been published as part of *MMWR* Vol. 39. For information regarding purchase of these documents, contact the U.S. Government Printing Office (telephone [202] 783-3238) or MMS Publications (telephone [617] 893-3800). For additional information, contact Editorial Services, Epidemiology Program Office, CDC (telephone [404] 332-4555).

Recommendations and Reports

- Public Health Service Statement on Management of Occupational Exposure to Human Immunodeficiency Virus, Including Considerations Regarding Zidovudine Postexposure Use (Vol. 39, No. RR-1, January 26, 1990).
- Protection Against Viral Hepatitis: Recommendations of the Immunization Practices Advisory Committee (ACIP) (Vol. 39, No. RR-2, February 9, 1990).
- Recommendations for the Prevention of Malaria Among Travelers (Vol. 39, No. RR-3, March 9, 1990).
- Compendium of Animal Rabies Control, 1990 (Vol. 39, No. RR-4, April 20, 1990).
- Viral Agents of Gastroenteritis: Public Health Importance and Outbreak Management (Vol. 39, No. RR-5, April 27, 1990).
- Yellow Fever Vaccine: Recommendations of the Immunization Practices Advisory Committee (ACIP) (Vol. 39, No. RR-6, May 4, 1990).
- Prevention and Control of Influenza: Recommendations of the Immunization Practices Advisory Committee (ACIP) (Vol. 39, No. RR-7, May 11, 1990).
- Screening for Tuberculosis and Tuberculous Infection in High-Risk Populations and The Use of Preventive Therapy for Tuberculous Infection in the United States: Recommendations of the Advisory Committee for Elimination of Tuberculosis (Vol. 39, No. RR-8, May 18, 1990).
- Mandatory Reporting of Infectious Diseases by Clinicians and Mandatory Reporting of Occupational Diseases by Clinicians (Vol. 39, No. RR-9, June 22, 1990).
- Typhoid Immunization: Recommendations of the Immunization Practices Advisory Committee (ACIP) and Prevention and Control of Tuberculosis in Facilities Provid-

Serial Publications – Continued

ing Long-Term Care to the Elderly: Recommendations of the Advisory Committee for Elimination of Tuberculosis (Vol. 39, No. RR-10, July 13, 1990).

- Guidelines for Investigating Clusters of Health Events (Vol. 39, No. RR-11, July 27, 1990).
- The Surgeon General's 1990 Report on: The Benefits of Smoking Cessation, *Executive Summary* (Vol. 39, No. RR-12, October 5, 1990).
- Case Definitions for Public Health Surveillance (Vol. 39, No. RR-13, October 19, 1990).
- Recommendations for Collection of Laboratory Specimens Associated with Outbreaks of Gastroenteritis (Vol. 39, No. RR-14, October 26, 1990).

CDC Surveillance Summaries

- Vol. 39, No. SS-1, March 1990:
  Waterborne Disease Outbreaks, 1986–1988.
  Foodborne Disease Outbreaks, 5-Year Summary, 1983–1987.
- Vol. 39, No. SS-2, June 1990:
  Behavioral Risk Factor Surveillance, 1988.
  Abortion Surveillance, 1986–1987.
- Vol. 39, No. SS-3, July 1990:
  Reports on Selected Racial/Ethnic Groups—Special Focus: Maternal and Child Health
  - Contribution of Birth Defects to Infant Mortality Among Racial/Ethnic Minority Groups, United States, 1983.
  - Racial/Ethnic Differences in Smoking, Other Risk Factors, and Low Birth Weight Among Low-Income Pregnant Women, 1978–1988.
  - Surveillance for AIDS and HIV Infection Among Black and Hispanic Children and Women of Childbearing Age, 1981–1989.
  - Infant Mortality Among Racial/Ethnic Minority Groups, 1983–1984.

The *Morbidity and Mortality Weekly Report* is prepared by the Centers for Disease Control, Atlanta, Georgia, and is available on a paid subscription basis from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, (202) 783-3238.

The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Mailstop C-08, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

Director, Centers for Disease Control
William L. Roper, M.D., M.P.H.

Director, Epidemiology Program Office
Stephen B. Thacker, M.D., M.Sc.

CDC
CENTERS FOR DISEASE CONTROL

Editor, *MMWR* Series
Richard A. Goodman, M.D., M.P.H.

Managing Editor
Karen L. Foster, M.A.

☆U.S. Government Printing Office: 1991-531-130/22035 Region IV

HHS Publication No. (CDC) 91-8017

Redistribution using permit imprint is illegal.

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control
Atlanta, Georgia 30333

Official Business
Penalty for Private Use $300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-284

A 48106SER 06 8639 9 X
SERIALS ACQUISITION DEPT
UNIVERSITY MICROFILMS
300 NORTH ZEEB ROAD
ANN ARBOR, MI 48106